

REMARKS

By the present amendment, each of the independent claims of this application has been amended to recite the feature of a variable spatial filter as previously recited in independent claims 12, 17 and 22 even though the term "variable" was inadvertently misspelled as "valuable" in claim 12, while more clearly setting forth the meaning of "variable". That is, as noted in the previous amendment filed June 13, 2003, "Further in accordance with the present invention as illustrated in Fig. 19 and other figures of the drawings, for example, a variable spatial filter 1270, for example, is utilized for cutting a light reflected from a pattern formed on the substrate, which features are now recited in claims 17 and 22, for example. Applicants submit that the aforementioned features as disclosed in the specification and drawings of this application and as now set in the claims of this application are not disclosed or taught in the cited art". By the present amendment, the features of the variable spatial filter are now recited in each of the independent claims, with the variable feature being clarified.

As described at page 39, line 27 to page 40, line 2 of the specification of this application, Fig. 19 shows an example of a pitch variable spatial filter 1270 using a metallic plate. As further described at page 40 of the specification, with respect to the variable spatial filter illustrated in Fig. 19, all that is required for positioning spatial filter is merely matching the pitch of linear patterns with a central linear pattern as a reference and to this end, a pitch varying mechanism for the spatial filter can be constituted easily. Fig. 20 illustrates a construction of the pitch variable spatial filter 1270 and as described at page 40, line 19 to page 41, line 6:

As illustrated therein, the spatial filter 1270 comprises a plurality of linear patterns 1271 formed on of a material high in light transmitting rate such as, for example, a metal, a metal oxide or plastic material, spring-like support members 1272, support members 1273, a fixing

means 1274, a screw 1275 and a screw driving means 1276. The screw 1275 has right-hand threads formed in its portion 1277 and left-hand threads formed in its portion 1278. The pitch between adjacent linear patterns 1271 can be changed by rotating the screw 1275 through the screw driving means 1276. In the operation of the screw driving means 1276, the pitch between adjacent linear patterns 1271 is controlled in accordance with a calculated value on the basis of a cell pitch d detected simultaneously with a chip pitch p at the time of introduction of the wafer. (emphasis added)

It is apparent that at least the aforementioned pitch d is representative of the pattern formed on the substrate. That is, as described at page 42, lines 18-26 of the specification, a linear pattern pitch on the wafer is d and Equation 9 is obtained and is necessary to establish a pitch varying mechanism which satisfies Equation 9. Thus, as pointed out, the pitch of the linear patterns of the spatial filter is varied according to the pattern formed on the substrate, as now recited in the claims of this application, which variability of the pitch of the linear patterns provides for a "variable" spatial filter as disclosed in the specification of this application as previously recited in claims 12, 17 and 22, and as now recited in each of the independent claims and therewith the dependent claims of this application, with the "variable" feature being clarified. As pointed out at pages 41 and 42 of the specification, although Fig. 20 illustrates one example of a drive mechanism, other drive mechanisms may be adopted which enable driving of the linear patterns so as to provide high shielding performance wherein the linear patterns 1271 are movable so as to change the pitch thereof. Applicants submit that the cited art does not disclose or teach a variable spatial filter as recited in the independent and dependent claims of this application, as will become clear from the following discussion.

The rejection of claims 1-27 under 35 U.S.C. 103(a) as being unpatentable over Kamoshida (4,571,685) in view of Koizumi et al (4,614,427) is traversed insofar as it is applicable to the present claims, and reconsideration and withdrawal of the rejection are respectfully requested.

At the outset, as to the requirements to support a rejection under 35 U.S.C. 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under §103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the recent decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge".

The court pointed out:

The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the

reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

In setting forth the rejection, the Examiner recognizes that while Kamoshida may disclose a detecting apparatus, "Kamoshida does not explicitly disclose a particle detecting apparatus". Therefore, the Examiner utilizes Koizumi indicating that "Koizumi discloses a system for detecting a foreign particles (columns 1-2)" and contending that "It would have been obvious to modify Kamoshida with Koizumi's particle detecting apparatus...". Moreover, at page 3 of the Office Action, the Examiner states:

With respect to claims 12, 17, 22, refer to discussion in claim 1. Further, Koizumi discloses using a filter (column 1, lines 30-65) to cut a light reflected from a pattern formed on the substrate. (emphasis added)

And at page 5, the Examiner states that:

Koizumi also discloses a cut filter. Refer to discussion in claim 12 for the cut filter.

Irrespective of the position set forth by the Examiner, applicants submit that Koizumi et al does not disclose or teach a "variable spatial filter" as previously recited in claims 12, 17 and 22, and as now recited in each of the independent claims of this application with the "variable" feature of the variable spatial filter being clarified by the recitation of "a light cutting portion of the variable spatial filter is variable according to the pattern" as further recited in each of the independent claims of this application.

Although the Examiner refers to the filter of Koizumi et al as described in col. 1, lines 30-65 of this patent, as clearly set forth therein, the cut filter is an "S-polarization cut filter (analyzer) 13" and serves for cutting or blocking S-polarized light from passing therethrough. Thus, irrespective of the position set forth by the Examiner that the filter disclosed by Koizumi cuts a light reflected from a pattern formed on the substrate, applicants submit that the S-polarization filter disclosed by Koizumi et al is not disclosed or taught to be a "variable spatial filter" nor to provide

that "a light cutting portion of the variable spatial filter is variable according to the pattern" of the substrate which, as described in the specification of this application, variability is obtained by varying the pitch of the linear patterns forming the variable spatial filter. Applicants note that Fig. 3 of Koizumi shows that the S-polarization cut filter 37 is movable out of the light path indicated to a position 38, but such movement also does not provide a variable spatial filter since even assuming arguendo that such movement constitutes variation, it is apparent that in the position 38, the filter is not operational. Furthermore, such variation is not in accordance with the pattern of the substrate. As such, applicants submit that there is no disclosure or teaching of the claimed features of the independent and dependent claims of this application in Koizumi et al as required by 35 U.S.C. 103. See In re Fine, supra. Furthermore, since the Examiner has recognized that Kamoshida fails to disclose or teach the recited features of a particle detecting apparatus and also fails to disclose a "variable spatial filter" as recited in the independent and dependent claims of this application, it is apparent that the proposed combination of Kamoshida and Koizumi et al fail to provide the claimed features as set forth in claims 1-27 of this application in the sense of 35 U.S.C. 103, and all claims patentably distinguish thereover.

For the foregoing reasons, applicants submit that all claims present in this application patentably distinguish over the cited art in the sense of 35 U.S.C. 103, and should be considered allowable at this time. Accordingly, issuance of an action of a favorable nature is courteously solicited.

The Examiner is invited to contact the undersigned attorney to schedule an interview to clarify any outstanding issues, if considered necessary.

To the extent necessary, applicant's petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing

of this paper, including extension of time fees, to Deposit Account No. 01-2135
(501.30598CC3) and please credit any excess fees to such deposit account.

Respectfully submitted,



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